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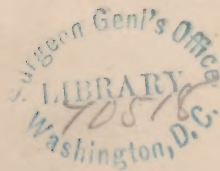
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MORTUARY EXPERIENCE  
OF  
THE MUTUAL LIFE

INSURANCE COMPANY OF NEW-YORK.

FROM 1843 TO 1874.



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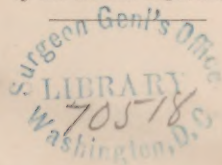


PRELIMINARY REPORT  
OF THE  
MORTALITY EXPERIENCE  
OF  
THE MUTUAL LIFE

INSURANCE COMPANY OF NEW YORK.

FROM 1843 TO 1874.

BY G. S. WINSTON, M. D., AND E. J. MARSH, M. D.,  
*Of the Medical Department.*



New York:  
PRINTED BY ORDER OF THE BOARD OF TRUSTEES.  
1875.



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Entered, according to Act of Congress, in the year 1876, by  
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*To the Policyholders of The Mutual Life Insurance Company of New York, and the Public :*

The present report of the experience of this Company, is the continuance of a design begun eighteen years ago. We then printed a volume compiled from our own experience and arranged by James Wynne, M. D., with some other matter bearing upon this subject.

In 1859 we published the experience of the Company for the first fifteen years of its history, from the records of the actuarial department.

The present publication is from the Medical department of the Company, and covers its entire mortality experience from 1843 to 1874.

Great professional tact and skill have been displayed by the Medical gentlemen whose names are signed to this report, in the arrangement and scientific classification of this mass of valuable material; and the results of their labors are most satisfactory to, and duly appreciated by, the Board of Trustees. These gentlemen have not only achieved results which are highly creditable to themselves, but which cannot fail to be serviceable to the Company in its future business. Their labors cover a period of an entire human generation, and embrace over 100,000 insured lives, with family histories, habits, occupations and other interesting points of vital statistics; all of which must have a special interest for persons engaged in life assurance.

The value of such full analyses and classifications of the results of experience must be apparent to all life insurance companies.

Life assurance, though largely developed, is yet but an experimental business in this country, in consequence, not only of the magnitude of the area over which policies are issued, the variety of climate, of occupations and habits of the people, but especially of the comparatively short period since 1843, when it began its active career.

Our actuary, Professor Bartlett, is engaged, with his staff, in preparing a reliable report of the experience of the Company from the records of his department, which will be published as soon as completed.

The two reports, that now printed by the Medical department, and the one from the Actuarial department, when published, will embody facts of the most important character for the attention and guidance of the Company in its future operations.

The following information, furnished by the Actuary, is very valuable, as showing the extent of the field in which the facts reported upon by the medical department transpired.

EXPERIENCE FROM BEGINNING—1st FEBRUARY 1843, TO THE 31st DECEMBER 1873,—  
30 YEARS AND 11 MONTHS.

Number of lives insured.....	101,967
Number who have died.....	5,385
Number living in the Company at end of 1873.....	68,688
Number of years of life lived in the Company in the interval.....	578,112½
Average age at entrance of those now living.....	35 <sup>3</sup> / <sub>10</sub>

F. S. WINSTON, *President*.



## PRELIMINARY REPORT.

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F. S. WINSTON, Esq.,

*President of The Mutual Life Insurance Company of New York.*

SIR:—Having been instructed by you to collate the mortality statistics and records of deaths that have occurred among those insured in The Mutual Life Insurance Company since its foundation, and to arrange them in tabular form for convenience of reference, and to deduce such lessons as this experience of the past might teach for future guidance, we now submit some general tables and observations upon them.

The total number of assured lives to the end of 1873 is 101,967. There have died during the same period 5385, or five thousand two hundred and twenty-four males, and one hundred and sixty-one females. The cases of females are given in the first table, while the subsequent ones include the males only. The females will be considered on a future occasion. We have omitted them in the general tables because they are few in number; and yet might, to some extent, if included, change the proportional mortality from different diseases, as they occur among males.

Table I. gives a list of causes of death, and numbers dying from each cause. The total numbers are subdivided into series of one thousand cases each in chronological sequence. This division was employed at first under the idea that errors could thus be more

easily avoided or discovered, and also that this chronological arrangement might show what, if any, difference existed between the experience of the first and last thousand losses of the company. By this subdivision some facts in the history of the company are prominently shown. For example: the numerous deaths from yellow fever, in the earlier years, when more insurances were taken in the Southern States; the epidemics of cholera; the losses from this disease, dysentery, and by casualty at the time of the first California emigration; the deaths from war casualties, diarrhœas and dysenteries, contracted in the army, as shown in the second series; and in the more recent series, the late epidemics of smallpox and cerebro-spinal fever. The most important lesson, however, to be learned is the fallacy of basing conclusions on too small numbers, as is evidenced in the extreme variations in the occurrence of the common diseases; as, cholera morbus occasioning *ten* deaths in one series, and *two* in the next; erysipelas giving *ten* deaths in one series, and *nineteen* in the next; and similarly of many others.

In arranging the list of diseases, the classification is nearly the same as that known as Dr. Farr's, and used in the mortality statistics of the Board of Health of New York City, Brooklyn, and many other cities. The classification of the London College of Physicians was followed in the reports of the last United States Census, but is not yet generally adopted. It is very similar to Dr. Farr's, and could be easily substituted if desirable.

TABLE I.

*TABLE OF DEATHS occurring in the MUTUAL LIFE INSURANCE COMPANY, from 1843 to 1873, inclusive, showing Causes of Deaths and Number Dying of each Cause, arranged in Chronological Series of 1,000 Cases.*

DISEASES.	TOTAL. 1843-'73	I. 1843-'62	II. 1862-'68	III. 1868-'70	IV. 1870-'71	V. 1871-'73	VI. 1873	FEMALES.
TOTAL.....	5,224	1,000	1,000	1,000	1,000	1,000	224	161
Smallpox.....	38	4	8	3	6	17	..	..
Measles.....	1	1	..	..	..	..	..	..
Scarlet fever.....	10	4	2	2	1	1	..	1
Diphtheria and malignant sore throat	12	2	3	1	4	2	..	..
Typhus fever.....	30	12	9	3	3	2	1	1
Typhoid fever.....	304	35	59	72	60	58	20	6
Erysipelas.....	78	15	20	13	10	19	1	1
Pyæmia.....	11	..	..	2	4	5	..	..
Cerebro-spinal fever.....	22	..	3	..	1	15	3	1
Yellow fever.....	27	18	3	2	..	..	4	..
Remittent fever.....	72	21	8	17	15	7	4	1
Intermittent fever.....	4	2	2	..	..	..	..	..
Congestive fever.....	37	7	11	7	4	4	4	3
Typho-malarial fever.....	3	..	3	..	..	..	..	..
Fever.....	28	12	4	4	4	4	..	2
Carbuncle.....	12	1	4	4	2	1	..	..
Influenza.....	1	..	..	1	..	..	..	..
Dysentery.....	81	34	19	8	9	7	4	2
Diarrhœa.....	53	18	19	5	4	7	..	2
Cholera.....	67	43	16	5	1	1	1	2
Cholera morbus.....	22	4	1	10	2	3	2	2
Goitre.....	1	..	..	..	..	..	1	..
Malignant pustule.....	1	..	..	..	1	..	..	..
Glanders.....	1	..	..	..	..	1	..	..
Purpura hæmorrhagica.....	3	..	1	..	..	2	..	..
Alcoholism.....	31	9	5	8	4	..	5	1
Total Zymotic Diseases.....	950	242	200	167	135	156	50	25
Anæmia.....	7	2	4	..	..	1	..	..
Cancer.....	91	7	20	17	16	27	4	..
Dropsy.....	82	19	21	12	18	11	1	8
Gout.....	7	2	1	1	..	2	1	..
Rheumatism.....	20	4	2	3	8	3	..	1
Gangrene.....	4	..	1	1	..	1	1	..
Tubercular meningitis.....	1	..	..	..	..	1	..	..
Lumbar abscess.....	4	1	1	..	1	1	..	..



TABLE I.—(Continued.)

DISEASES.	TOTAL. 1843-'73	I. 1843-'62	II. 1862-'68	III. 1868-'70	IV. 1870-'71	V. 1871-'73	VI. 1873	FEMALES.
Scrofula.....	5	2	1	1	..	1	..	1
Tabes Mesenterica.....	17	3	6	2	4	2	..	..
Morbus Coxæ.....	2	1	..	1	..	..	..	..
Consumption.....	920	183	150	197	184	171	35	26
Total Constitutional Diseases.....	11,60	224	207	235	231	221	42	36
Apoplexy.....	307	58	50	58	57	69	15	6
Congestion of brain.....	110	23	19	16	26	21	5	1
Softening of brain.....	67	11	10	12	17	16	1	1
Paralysis.....	132	23	22	26	33	22	6	5
Disease of brain.....	82	16	19	13	21	11	2	1
Convulsions and epilepsy.....	32	5	12	6	6	3	..	1
Insanity.....	28	2	2	10	3	8	3	..
Anxiety.....	2	..	..	1	..	1	..	..
Fright.....	1	1	..	..	..	..	..	..
Encephalitis.....	64	9	7	19	13	13	3	2
Cerebro-spinal sclerosis.....	1	..	..	..	..	1	..	..
Cerebral embolism.....	1	..	..	..	..	1	..	..
Anæmia of brain.....	1	..	..	..	..	1	..	..
Effusion on brain ..	4	1	1	2	..	..	..	..
Neuralgia.....	3	2	..	1	..	..	..	..
Progressive muscular atrophy .....	2	..	1	1	..	..	..	..
Tetanus.....	..	..	..	..	..	..	..	1
Inflammation of spinal cord.....	4	..	1	..	2	1	..	..
Disease of spinal cord.....	7	1	2	..	3	1	..	1
Congestion of spinal cord.....	1	..	..	..	..	1	..	..
Total Diseases of Nervous System.	849	152	146	165	181	170	35	19
Disease of heart.....	201	26	38	41	39	44	13	7
Peri-and endo-carditis.....	22	5	4	8	1	4	..	..
Hypertrophy of heart.....	17	5	5	2	3	2	..	..
Valvular disease of heart.....	12	..	..	10	2	..	..	..
Fatty degeneration of heart.....	13	1	5	3	..	4	..	..
Dropsy of heart ..	8	..	2	1	3	2	..	..
Rheumatism of heart.....	9	1	3	..	2	3	..	3
Atrophy of heart.....	2	..	..	..	..	1	1	..
Paralysis of heart.....	1	1	..	..	..	..	..	..
Abscess of heart.....	1	..	..	..	..	1	..	..
Angina pectoris.....	17	4	5	1	3	4	..	..
Aneurism of aorta.....	17	6	1	1	4	3	2	..
Rupture of aorta.....	1	..	..	..	1	..	..	..
Embolus of pulmonary artery.....	..	..	..	..	..	..	..	1
Phlebitis.....	4	2	1	1	..	..	..	..
Total Diseases of Circulatory System	325	51	64	68	58	68	16	11
Epistaxis.....	1	1	..	..	..	..	..	..
Disease of larynx ..	14	2	2	3	2	5	..	..
Bronchitis.....	47	11	5	10	10	10	1	2
Pleurisy.....	41	9	8	5	6	7	6	1

TABLE I.—(Continued.)

DISEASES.	TOTAL.	I.	II.	III.	IV.	V.	VI.	FEMALES.
	1843-'73	1843-'62	1862-'68	1868-'70	1870-'71	1871-'73	1873	
- Congestion of lungs.....	61	14	20	11	3	10	3	6
- Inflammation of lungs.....	388	36	72	61	87	115	17	15
Abscess of lungs.....	12	5	3	..	1	3	..	..
Hemorrhage of lungs.....	48	19	9	8	10	1	1	1
Disease of lungs.....	20	10	5	4	1	..	..	..
Emphysema and asthma.....	8	3	1	1	1	2	..	1
Pulmonary apoplexy.....	4	1	1	2	..	..	..	..
Gangrene of lungs.....	3	..	2	..	1	..	..	..
Edema of lungs.....	1	..	1	..	..	..	..	..
Total Diseases of Respiratory System	648	111	129	105	122	153	28	26
Inflammation of stomach.....	31	5	5	6	7	7	1	2
Ulceration of stomach.....	16	2	4	3	2	5	..	..
Disease of stomach.....	19	6	4	3	3	3	..	..
Hemorrhage of stomach.....	8	3	1	1	2	1	..	..
Congestion of stomach.....	1	..	..	1	..	..	..	..
Tumor of stomach.....	2	1	..	..	1	..	..	..
- Inflammation of bowels.....	94	25	24	17	20	6	2	4
Ulceration of bowels.....	16	6	3	1	5	1	..	..
Hemorrhage of bowels.....	16	5	4	4	1	1	1	..
Congestion of bowels.....	4	1	..	..	1	1	1	..
Disease of bowels.....	7	3	1	..	1	2	..	..
Obstruction of bowels.....	6	1	..	3	2	..	..	..
Perforation of bowels.....	2	..	..	1	..	1	..	..
- Peritonitis.....	57	4	9	11	11	16	6	4
Gastro enteritis.....	15	3	3	2	3	4	..	1
Disease of stomach and bowels.....	2	1	..	1	..	..	..	..
Hemorrhage ".....	1	..	..	..	1	..	..	..
Strangulated hernia.....	5	..	..	2	2	1	..	1
Colic, Tympanites and Constipation.	7	3	2	1	..	1	..	..
Dyspepsia.....	3	..	..	..	..	3	..	..
Gangrene of tongue.....	1	1	..	..	..	..	..	..
Stricture of œsophagus.....	1	..	1	..	..	..	..	..
Fistula in ano.....	2	..	..	..	..	1	1	..
Diseases of spleen.....	4	..	2	2	..	..	..	..
Leucocythæmia.....	2	..	..	..	1	1	..	..
Ascites.....	10	2	1	3	2	2	..	2
Abdominal tumor.....	2	1	..	1	..	..	..	..
Undefined diseases, abdomin'l organs	7	4	1	2	..	..	..	..
Jaundice.....	10	1	4	3	..	2	..	..
Inflammation of liver.....	31	2	5	7	12	5	..	1
Cirrhosis of liver.....	25	..	5	3	6	6	5	..
Abscess of liver.....	14	..	1	4	5	4	..	..
Disease of liver.....	45	5	9	11	11	7	2	1
Congestion of liver.....	10	4	1	1	3	..	1	..
Hypertrophy of liver.....	4	..	1	1	1	1	..	..
Acute yellow atrophy of liver.....	1	..	..	1	..	..	..	..
Fatty degeneration of liver.....	2	..	..	1	..	1	..	..
Biliary calculus.....	3	..	..	2	..	..	1	..
Obstruction of hepatic duct.....	1	..	..	1	..	..	..	..

TABLE I.—(Continued.)

DISEASES.	TOTAL.	I.	II.	III.	IV.	V.	VI.	FEMALES.
	1843-'73	1843-'62	1862-'68	1868-'70	1870-'71	1871-'73	1873	
Rupture of gall bladder.....	1	..	..	..	..	1	..	..
Total Diseases of Digestive System	488	89	91	100	103	84	21	16
Bright's disease.....	82	..	11	28	19	16	8	..
Inflammation of kidneys.....	8	1	1	3	..	3	..	..
Abscess of kidneys.....	2	1	..	..	..	1	..	..
Tumor of kidney.....	1	..	1	..	..	..	..	..
Disease of kidneys.....	53	5	10	6	17	13	2	1
Diabetes.....	40	6	6	6	12	9	1	..
Addison's disease.....	1	..	..	1	..	..	..	..
Inflammation of bladder.....	8	2	2	2	2	..	..	1
Disease of bladder.....	6	..	1	..	4	1	..	..
Hemorrhage of bladder.....	1	..	..	1	..	..	..	..
Rupture of bladder.....	1	..	1	..	..	..	..	..
Urinary calculi.....	2	..	..	..	1	1	..	..
Gravel.....	2	1	1	..	..	..	..	..
Disease of prostate gland.....	7	2	1	2	1	..	1	..
Stricture of urethra.....	3	1	..	..	2	..	..	..
Gangrene of scrotum.....	1	..	1	..	..	..	..	..
Total Diseases of Urinary System	218	19	36	49	58	44	12	2
Debility, Exhaustion and Prostration	61	8	16	11	12	11	3	1
Abscess.....	21	5	4	5	2	3	2	..
Hemorrhage.....	5	2	..	1	1	1	..	..
Tumors.....	7	..	1	..	3	2	1	2
Inflammation of joints.....	2	..	2	..	..	..	..	..
Old age.....	13	..	..	3	6	4	..	2
Total.....	109	15	23	20	24	21	6	5
Accidents and Injuries.....	357	60	90	74	70	51	12	2
Suicides.....	59	11	4	14	11	17	2	..
Total violent deaths.....	416	71	94	88	81	68	14	2
Cause unknown or ill-defined.....	61	26	10	3	7	15	..	2
Childbirth and Puerperal Diseases..	..	..	..	..	..	..	..	17

In stating these causes of death, due allowance must be made for their probable and almost necessary inaccuracies. Carelessness in making out the certificates of death, ignorance on the part of many practicing physicians, and unavoidable doubts, owing to the inexactness of medical science, and changes in medical nomenclature and pathology, all tend to render any such mortality tables incorrect



in many details. Still, as the same elements exist, and in probably the same proportions in all cases, they do not interfere with the comparison of reports gathered from various sources.

The first general class—zymotic diseases—has been the cause of nine hundred and fifty deaths, and of these, the first series of 1,000 cases, viz.: from 1843 to 1862, gives by far the highest proportion, on account of the losses from yellow fever, cholera, and dysentery, which have prevailed subsequently to a very limited extent.

Typhoid fever caused very few deaths in the first series, but afterwards rapidly increased; while malarial fevers have considerably diminished.

There have been thirty-eight deaths from smallpox, half of which occurred during the recent epidemic of 1872 and 1873. The percentage of this disease in the total mortality is small, but still we believe it could be almost entirely done away with by strict insistence on successful revaccination of applicants.

Twenty-two deaths by cerebro-spinal fever are recorded, almost all during 1872 and 1873. This number will probably be increased by a further examination of cases, some deaths from this disease having been ascribed to meningitis.

In the first and second series, 1843 to 1868, there is quite a large number of deaths from diarrhœa and dysentery, which occurred chiefly among the California settlers, and the soldiers in the late war.

Thirty-one deaths are recorded as caused by alcoholism, meaning thereby its immediate effects, intemperance, or delirium tremens. It would be extremely desirable to ascertain how far it was a remote cause of premature death, if this were possible, but it certainly cannot be done by an examination of the certificates of death. As the use of alcoholic drinks is believed by many to be a most important factor in abridging the duration of life, it is a matter for serious consideration whether we can obtain any valuable statistics from the company's

records and experience, by comparing the length of life, and cause of death, arranged according to the habits of the individual at the time of application, or through life when known.

The second class—constitutional diseases—caused one thousand one hundred and sixty deaths in all, with no special prevalence for any one series, though with some fluctuations. Consumption caused nine hundred and twenty deaths, cancer ninety-one, dropsy eighty-two, rheumatism twenty, and gout only seven deaths.

Consumption has been the cause of far more deaths than any other disease, giving a percentage of 17.61 of the total mortality, while deaths recorded under other headings, but properly belonging to this, would swell the number to 20 per cent. This is a very large percentage, but still much smaller than that occurring in the population at large. In the report of the Board of Health of New York City, for 1871, the mortality from consumption is given as 13½ per cent of the total. But this is not a fair comparison for insurance purposes, for the reason that the large mortality of young children, from their peculiar diseases, makes the percentage of the diseases of adults comparatively small. A calculation of the deaths of adult males, taken from the above-mentioned report, gives consumption a percentage of 30.17 on the total mortality for this period of life. Our percentage of 17.61 seems to compare favorably with this.

The deaths from cancer have been ninety-one, and those from dropsy eighty-two. Dropsy is properly only a symptom, though often given as the disease causing death; and whenever the real cause could be ascertained, the case has been referred to its proper head.

The deaths from diseases of the nervous system were eight hundred and forty-nine, embraced principally under apoplëxy, paralysis, and softening, congestion and disease of the brain. We believe these terms are used synonymously by many physicians, and should, therefore, be calculated together in our general tables. However, we

have as yet considered them apart in most cases. This class of diseases appears to have increased somewhat, though not materially, in number during the last few years, probably because more elderly persons are insured now than formerly.

In twenty-eight cases, insanity is recorded as the cause of death, while in addition several other insane persons committed suicide, and their cases are recorded under this title. The prevalence of this disease appears, from the series, to be irregularly fluctuating.

Three hundred and three deaths are attributed to some form of heart disease, and seventeen to thoracic aneurism. The number of these has increased in frequency of late years, and probably for the same reason mentioned in diseases of the brain. In two-thirds of the cases, "disease of the heart" alone is stated, while in one-third the special form of disease is mentioned.

Six hundred and forty-eight deaths are recorded from diseases of the respiratory organs; of these, three hundred and eighty-eight cases were from pneumonia, and forty-seven from bronchitis. It is most probable that those diseases are often confounded in diagnosis and death certificates. The number of deaths from pneumonia has constantly increased with almost every series, from thirty-six in the first, to one hundred and fifteen in the last. We are entirely unable to account satisfactorily for this increase. The deaths from abscess of lungs, hemorrhage of lungs, and disease of the lungs should, probably, all be included under consumption; but, for the present, we have placed them with diseases of the respiratory organs.

Diseases of the digestive organs have caused four hundred and eighty-eight deaths. They are recorded under very many names, and different affections, the diagnosis of which must have been doubtful, so that, for any practical purpose, they must be collected in large groups. We find here an example of the change of nomenclature and pathology, viz.: "inflammation of the bowels," which is frequently recorded in the earlier series, while in the latter peritonitis takes



its place to a certain extent, both names evidently referring to the same affection.

There were five deaths from hernia, in only one of which it is recorded that there existed a hernia at the time of insurance.

Diseases of the urinary organs have caused two hundred and eighteen deaths. Eighty-two were from "Bright's disease," and fifty-three from "disease of kidneys." It is noteworthy that, in the first series, extending from 1843 to 1861, there is not a single case reported of death from "Bright's disease," and only five from "disease of the kidneys." This is not because the disease did not exist and cause death, but only that up to a very late period it was not generally recognized by physicians, and deaths now attributed to Bright's disease were formerly recorded as "dropsy," "convulsions," "congestion of brain," etc.

The number of deaths from accidents and injuries was three hundred and fifty-seven, of which the second series, 1862 to 1868, gives the largest proportion—ninety; among these are included twenty-nine killed in battle. These accidental deaths should be still further subdivided to show the kind of accident producing death, but we have not yet been able to make such a list, many of them being merely recorded as "accident" or "casualty." In the last two years the deaths from this cause have greatly fallen off in number. The total number of deaths from suicide has been fifty-nine. The last series gives the largest proportion, but this is probably an accidental occurrence, as there is no regular or gradual increase with each series.

There have been thirteen deaths from "old age," and all have occurred within a very few years.

In examining a record of deaths occurring in an insurance company, it will, of course, be remembered that this can give no idea of the actual mortality experience of the company compared to the total number insured. This proportion must be elsewhere ascertained.

We have to deal only with the dead, and those surviving are not taken into the calculation. We hope to learn from these records, however, at what age each disease is most to be expected in each section of the country; what diseases are to be anticipated and guarded against; what, if any, may be the difference between natives and foreign-born in respect to longevity; how long the influence of the medical examination of applicants effects the mortality among assured lives.

Furthermore, we can learn the effect of occupation, hereditary tendencies, and physical condition and configuration. The first portion of these enquiries we have attempted to elucidate, and have prepared tables showing the experience of the company in these respects. The results are not very marked in all cases, and, sometimes, of doubtful value on account of the small number of cases examined. In compiling these tables it has not been thought necessary to consider each disease by itself on account of the large number of diseases recorded, and often, the small number of cases of each one of them; but the more important ones have been tabulated and the others consolidated into the nosological classes to which they belong. We have thus formed columns of thirty-seven diseases, or groups of diseases, and afterwards again consolidated these into fourteen groups, and considered these in four ways: 1st, age at death; 2d, nativity; 3d, residence at death; 4th, year of insurance at which death occurs.

Beginning with the 1st, we have formed three tables, marked II. III. IV. and one colored diagram, V. Table II. gives the causes of death, and the number of persons dying at each year of life; Table III. grouped in decennial periods of life; Table IV. causes of death consolidated and ages grouped in decennial periods; and the colored diagram illustrates the last table.

The table of individual years is interesting, but when thus divided up, the figures are too few to lead to useful results. When consolidated into decennial periods they become far more regular in their course,

TABLE II.

AGE AT DEATH.	TOTAL.	Typhoid and Typhus Fevers.		Malarial Fevers.		Erysipelas.		Dysentery.		Diarrhea.		Cholera.		Alcoholism.		Other Zymotic Diseases.		Dropsy.		Cancer.		Consumptions.		Other Constitutional Dis- eases.		Apoplexy.		Congestion of Brain.		Paralysis, Softening and Apoplexy.		Tubercles, and Other Diseases of Nervous System.		Diseases of the Heart.		Other Diseases of the Cir- culatory System.		Pneumonia.		Congestion of Lungs.		Bronchitis and Pleurisy.		Abscess, Hemorrhage, and Other Diseases of Lungs.		Other Diseases of the Res- piratory System.		Diseases of Stomach.		Diseases of Bowels.		Peritonitis.		Diseases of Liver.		Other Diseases of the Di- gestive System.		Diseases of Kidneys.		Other Diseases of Urinary System.		Abscess, Hemorrhage, Old Age, &c.		Debility, Exhaustion and Debility.		Accidents and Injuries.		Suicides.		Cause unknown or ill-de- fined.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
		334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
18	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1



TABLE II.—(Continued.)

Age at Death.	Total.	Type and Extent of Lesions										Total.
		Myocarditis.	Pericarditis.	Thrombosis.	Cholesterol.	Arteriosclerosis.	Coronary Atherosclerosis.	Thrombosis.	Myocarditis.	Consumption.	Other Lesions.	
83	120	4	2	1	2	1	1	1	1	1	1	120
84	110	1	1	1	1	1	1	1	1	1	1	110
85	120	3	1	1	1	1	1	1	1	1	1	120
86	80	1	1	1	1	1	1	1	1	1	1	80
87	82	1	1	1	1	1	1	1	1	1	1	82
88	88	1	1	1	1	1	1	1	1	1	1	88
89	80	3	1	1	1	1	1	1	1	1	1	80
90	60	1	1	1	1	1	1	1	1	1	1	60
91	62	1	1	1	1	1	1	1	1	1	1	62
92	64	1	1	1	1	1	1	1	1	1	1	64
93	63	1	1	1	1	1	1	1	1	1	1	63
94	55	1	1	1	1	1	1	1	1	1	1	55
95	44	1	1	1	1	1	1	1	1	1	1	44
96	40	1	1	1	1	1	1	1	1	1	1	40
97	46	1	1	1	1	1	1	1	1	1	1	46
98	48	1	1	1	1	1	1	1	1	1	1	48
99	28	1	1	1	1	1	1	1	1	1	1	28
70	20	1	1	1	1	1	1	1	1	1	1	20
71	20	1	1	1	1	1	1	1	1	1	1	20
72	18	1	1	1	1	1	1	1	1	1	1	18
73	17	1	1	1	1	1	1	1	1	1	1	17
74	15	1	1	1	1	1	1	1	1	1	1	15
75	7	1	1	1	1	1	1	1	1	1	1	7
76	13	1	1	1	1	1	1	1	1	1	1	13
77	7	1	1	1	1	1	1	1	1	1	1	7
78	7	1	1	1	1	1	1	1	1	1	1	7
79	3	1	1	1	1	1	1	1	1	1	1	3
80, 81, 82	7	1	1	1	1	1	1	1	1	1	1	7
91	1	1	1	1	1	1	1	1	1	1	1	1
Unknown	22	1	1	1	1	1	1	1	1	1	1	22

TABLE III.

AGE AT DEATH.	Total.	Typhoid & Typhus Fever.	Malaria Fever.	Erysipelas.	Dysentery.	Diarrhoea.	Cholera.	Alcoholism.	Other Zymotic Dis- eases.	Dropsy.	Cancer.	Consumption.	Other Constitutional Diseases.	Apoplexy.	Congestion of Brain.	Paralysis, Softening, and Diseases of the Brain.	Epilepsy and Con- vulsions.	Other Diseases of Nervous System.	Diseases of Heart.	Other Diseases of the Circulatory System.
TOTAL ...	5,224	334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22
Percentage ...		6.39	2.22	1.49	1.55	1.01	1.28	.59	3.64	1.57	1.74	17.61	1.28	5.88	2.11	5.38	.61	2.28	5.80	4.2
18 to 29 yrs.	488	68	9	5	10	3	7	3	20	1	2	167	9	8	9	7	5	8	9	...
Percentage	9.34	13.93	1.84	1.02	2.05	.61	1.43	.61	4.10	.20	.41	34.22	1.84	1.64	1.84	1.43	1.02	1.64	1.84	...
30 to 39 yrs.	1,429	104	39	21	30	11	27	13	57	9	14	358	16	36	34	49	15	30	48	5
Percentage	27.35	7.28	3.73	1.47	2.10	.77	1.89	.91	3.99	.63	.98	35.06	1.12	2.52	2.38	3.43	1.05	2.10	3.36	35
40 to 49 yrs.	1,599	96	38	23	24	14	20	12	58	31	17	263	14	105	40	70	5	42	71	6
Percentage	28.83	6.36	2.52	1.52	1.59	.93	1.33	.79	3.84	2.05	1.13	17.43	.93	6.96	2.65	1.64	.33	2.78	4.71	40
50 to 59 yrs.	1,100	45	18	20	12	11	13	3	47	25	38	101	15	95	19	84	3	26	90	8
Percentage	21.06	4.09	1.64	1.82	1.09	1.03	1.18	.27	1.27	2.27	3.45	9.18	1.36	8.64	1.73	7.64	.27	2.36	8.18	73
60 to 69 yrs.	541	19	10	9	4	8	...	...	6	15	18	25	8	53	6	54	3	12	69	3
Percentage	10.36	3.51	1.85	1.66	.74	1.48	...	...	1.11	2.77	3.33	4.62	1.48	9.80	1.11	9.98	.55	2.22	12.75	55
70 to 79 yrs.	127	2	2	...	1	5	...	...	2	1	2	6	5	10	2	16	1	1	16	...
Percentage	2.43	1.57	1.57	...	.79	3.94	...	...	1.57	.79	1.57	4.73	3.94	7.88	1.57	12.60	.79	.79	12.60	...
80 to 91 yrs.	8	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Percentage	.15	...	...	...	...	12.50	...	...	...	...	...	...	...	...	...	12.50	...	...	...	...
Unknown ...	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Percentage	.42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE III.—(Continued.)

AGE AT DEATH.	Total.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleu- risy.	Abscess, Hemorrhage, (old age, &c.)	Other Diseases of Respiratory Sys- tem.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	(Other Diseases of Digestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Urinary System.	Abscess, Hemorrhage, and Disease of Lungs.	Debility, Prostration and Exhaustion.	Accidents and Inj- uries.	Suicides.	(Cause unknown or ill-defined.
TOTAL....	5,224	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61
Percentage .....	7.43	1.17	1.68	1.55	.57	1.47	2.76	1.09	2.81	1.21	.77	2.78	.63	.92	1.17	6.84	1.13	1.17	
18 to 29 yrs.	458	20	4	5	10	4	2	15	9	1	4	1	6	1	1	4	48	2	1
Percentage .....	9.34	4.10	.82	1.02	2.05	.82	.41	3.07	1.84	.20	.82	.20	1.23	.20	.20	.82	9.84	.41	.20
30 to 39 yrs.	1,429	93	16	23	35	7	17	46	16	27	19	7	21	5	6	8	128	22	17
Percentage .....	27.35	6.51	1.12	1.61	2.45	.49	1.19	3.22	1.12	1.89	1.33	.49	1.47	.35	.42	.56	8.96	1.54	1.19
40 to 49 yrs.	1,509	116	14	22	25	8	19	37	17	61	16	18	38	3	15	13	112	15	11
Percentage .....	28.89	7.69	.93	1.46	1.66	.53	1.26	2.45	1.13	4.04	1.06	1.19	2.52	.20	.99	.86	7.42	.99	.73
50 to 59 yrs.	1,100	95	18	24	6	9	24	28	9	40	12	7	43	8	7	22	51	14	10
Percentage .....	21.06	8.64	1.64	2.18	.55	.82	2.18	2.55	.82	3.64	1.09	.64	3.91	.73	.64	2.00	4.64	1.27	.91
60 to 69 yrs.	541	49	6	10	5	1	11	17	5	17	12	5	30	15	5	11	14	6	...
Percentage 10.36	9.06	1.11	1.85	.92	.18	.18	2.03	3.14	.92	3.14	2.22	.92	5.54	2.77	.92	2.03	2.59	1.11	....
70 to 79 yrs.	127	15	3	3	....	1	3	1	1	1	....	2	7	1	10	3	4	....	....
Percentage .....	2.43	11.81	2.36	2.36	....	.79	2.36	.79	.79	.79	....	1.57	5.51	.79	7.88	2.36	3.15	....	....
80 to 89 yrs.	8	....	....	1	....	....	1	....	....	....	....	....	....	....	4	....	....	....	....
Percentage .....	.15	....	....	12.50	....	....	12.50	....	....	....	....	....	....	....	50.00	....	....	....	....
Unknown.	22	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	22
Percentage .....	.42	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....



TABLE IV.

AGE AT DEATH.	TOTAL.	Typhus & Typhoid Fevers.	Other Zymotic Diseases.	Consumption.	Cancer.	(Other Constitutional Diseases.	Apoplexy.	Other Diseases of Nervous System.	Diseases of Circulatory System.	Pneumonia.	(Other Diseases of Respiratory System.	Diseases of Digestive System.	Diseases of Urinary System.	Accidents and Suicides.	(Including Old Age).
TOTAL.....	5,224	334	616	920	91	149	307	542	325	388	260	488	218	416	170
Percentage.....	..	6.39	11.79	17.61	1.74	2.85	5.88	10.38	6.22	7.43	4.98	9.34	4.17	7.96	3.25
18 to 29 years.....	488	68	57	167	2	10	8	29	9	20	23	31	8	50	6
Percentage.....	9.34	13.93	11.68	34.22	.41	2.95	1.64	5.94	1.85	4.19	4.71	6.35	1.64	10.25	1.23
30 to 39 years.....	1,429	104	198	358	14	25	36	128	53	93	81	125	33	150	31
Percentage.....	27.35	7.28	13.86	25.06	.98	1.75	2.52	8.96	3.71	6.51	5.67	8.75	2.31	10.50	2.17
40 to 49 years.....	1,509	96	189	263	17	45	105	157	77	116	69	150	59	127	39
Percentage.....	28.89	6.36	12.52	17.43	1.13	2.98	6.96	10.40	5.10	7.69	4.57	9.94	3.91	8.42	2.58
50 to 59 years.....	1,100	45	124	101	38	40	95	132	98	95	57	113	58	65	39
Percentage.....	21.06	4.09	11.27	9.18	3.45	3.64	8.64	12.00	8.91	8.64	5.18	10.27	5.27	5.91	3.55
60 to 69 years.....	541	19	37	25	18	23	53	75	72	49	22	62	50	20	16
Percentage.....	10.36	3.51	6.84	4.62	3.33	4.25	9.80	13.86	13.31	9.06	4.07	11.46	9.21	3.70	2.96
70 to 79 years.....	127	2	10	6	2	6	10	20	16	15	7	6	10	4	13
Percentage.....	2.43	1.57	7.88	4.73	1.57	4.73	7.88	15.75	12.60	11.81	5.51	4.73	7.88	3.15	10.24
80 to 91 years.....	8	.....	1	.....	.....	.....	.....	1	.....	.....	1	1	.....	.....	4
Percentage.....	.15	.....	12.50	.....	.....	.....	.....	12.50	.....	.....	12.50	12.50	.....	.....	50.00
Unknown.....	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
Percentage.....	.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....







and age will be found one of the most, probably the most, important factor regulating the causes of mortality. In all the most important diseases, the number will be found to vary directly with the age.

The total numbers do not thus vary, although the proportions do for the reason that the chief proportion of those insured and exposed consists of middle-aged persons.

The diseases which show the most marked variations in the number of deaths are typhoid fever, consumption, accidental deaths on the one hand, and cancer, apoplexy, heart disease, pneumonia and disease of kidneys on the other.

DISEASE.	18 to 29 years.	60 to 69 years.
Typhoid fever.....	13.93	3.51
Consumption .....	34.22	4.62
Casualties .....	10.25	3.70
	58.41	11.83
Diseases of nervous system.....	7.58	23.66
Diseases of heart.....	1.85	13.31
Pneumonia .....	4.10	9.06
Diseases of urinary organs.....	1.64	9.24
	15.15	55.27

These comparative proportions are well shown in the accompanying colored diagram, arranged for each decennial period, and in which the relative proportions of most diseases are seen steadily and regularly increasing or diminishing.

In estimating the comparative frequency and mortality of these diseases occurring in the different periods of life, it must be remembered that they do not at all represent the actual frequency at the age given, but only the proportion as a cause of death. The table does not show necessarily that typhoid fever is more prevalent or fatal among the young than the old, although this is true and proved by other calculations. It only shows that of an equal number of

persons dying at the respective periods of life from eighteen to twenty-nine years, and from sixty to sixty-nine years, there will be four times as many deaths from typhoid fever among the younger. Consumption kills one-third of those dying in early manhood, and only one-twentieth of those dying in advanced life, and yet the actual mortality from this disease is nearly, if not quite, equal for both periods, that is, when taken from equal numbers of those living or exposed at the given ages.

With advancing life new diseases and causes of death appear, and these not only increase the total mortality, but also change the relative proportion of the various causes of death. The same diseases may continue to exist and to exert their former influence, but the prevalence of the new diseases diverts our attention from them and appears to make them less frequent.

The diagram shows how large a proportion of the scale is taken up by fevers and consumption in the earlier decades of life, and how small a proportion by diseases of the nervous and circulatory systems.

These proportions are seen to be gradually reversed with increasing age, but this may be, and is to a very large extent, occasioned not so much by a diminution of the first-named diseases as by an increase of the latter.

Young persons do *not* frequently die of apoplexy, paralysis, heart and kidney disease, as these arise largely from the tissue degenerations and changes incident to old age, and consequently the causes of death at an early period of life will be some acute fever, accident or consumption. Old persons die in larger proportions than the young; many may die of old age, and a few of consumption, and still the proportion of those dying of consumption, calculated on the number living, may be equal in both cases, though the percentage of deaths from this disease on the total number in the one case may be very large, and in the other very small.

This is a very important consideration, and often overlooked both by insurance companies and the profession, especially with regard to consumption, which has come to be considered by physicians and laity as a disease of youth, while for those past forty years of age it is thought the danger from this cause is comparatively slight.

In the experience of this company there have been 525 deaths from phthisis in persons under forty, and 395 above that age.

We have not yet been able to find or construct a reliable table showing the number of deaths from consumption in the population at large during each decennial period of life, but a few rough calculations that we have made indicate that deaths from this cause are of nearly equal percentage at all ages.

Dr. Fuller says that it is quite prevalent at advanced life. Dr. Chambers in his "*Decennium Pathologicum*" shows the same, and Dr. Sieveking, in his recent work on Life Insurance Examinations, says that Dr. Chambers' researches "prove that youth is not to be regarded as the harvest time for consumption, and that the proportionate mortality from that disease does not vary between the ages of fifteen and seventy as much as is generally supposed." And again, "we would warn the medical officer against yielding to the popular impression that this inquiry" (into hereditary tendency to consumption) "becomes unnecessary after full manhood is reached, as the danger of phthisis continues beyond the age of sixty." In the very last medical publication on Life Insurance, an examination of the causes of death in the Scottish Widow's Fund Life Assurance Society, Dr. Begbie says that in this experience "of 145 deaths from consumption as many occurred above as under forty years of age. \* \* It is worthy of remark that of the eleven members of this society whose death occurred from consumption above sixty years of age, only three had entered at the average age of insurers; the remaining eight insured above thirty-five, six of the eight above forty and two of the six above fifty." We have made these quotations and dwelt thus fully on this subject because we



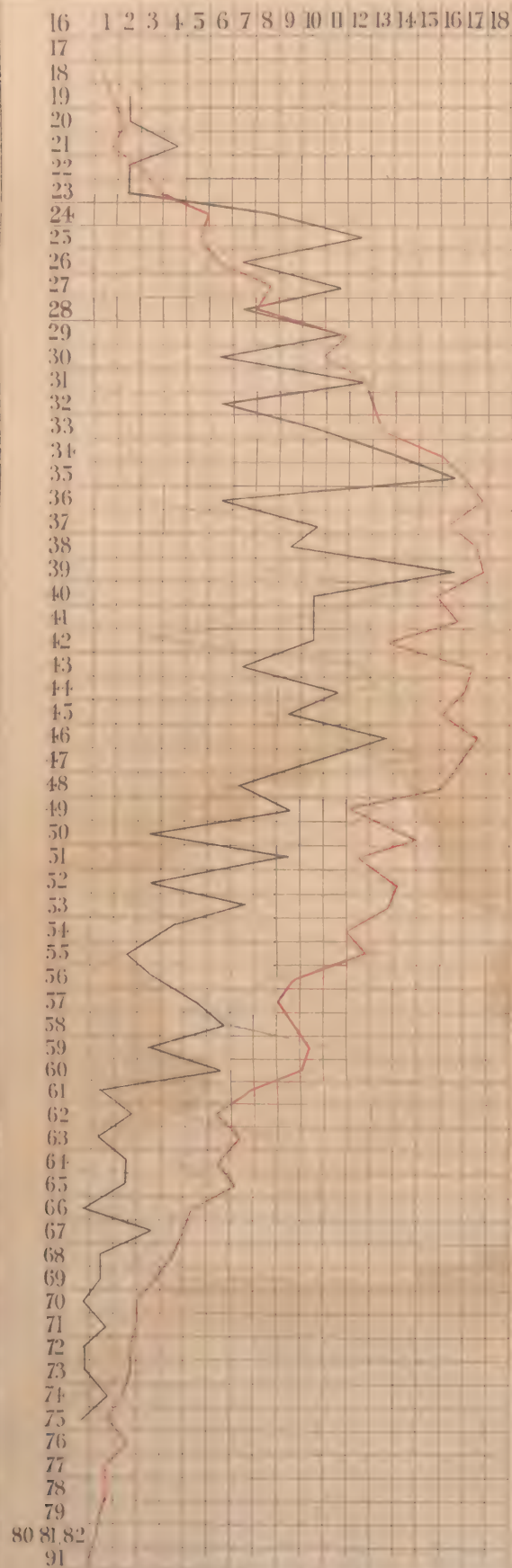
believe it of great importance, and we hope at a future time to elucidate it still further.

Pneumonia is probably also equally prevalent at all ages, but it is more frequently fatal with the old, and therefore forms a larger percentage of mortality at this time of life.

Casualties form a large percentage among the young, because they are more reckless, and more exposed to danger in travelling and active business occupations.

As we have above remarked, the occurrence of a greater number of deaths from a given disease, among the young, does not prove that the disease is more prevalent or fatal at that age, for the reason that the number living at the younger age is greater. (We are now speaking of mortality in general and not of life insurance experience.) For a similar reason the occurrence of more numerous deaths from a given disease at more advanced periods of life, does prove that such disease is more frequent or fatal then. Such we find to be the case in our tables for apoplexy and paralysis, diseases of the heart and kidneys, and pneumonia. At what particular age tendency to apoplexy, paralysis, disease of heart and kidneys begins cannot be proved by these figures, although they seem to point to the period between thirty-five and forty years for apoplexy and kidney diseases, and forty-five years for diseases of the heart. We have taken two of the diseases mentioned—typhoid fever and apoplexy—and given a diagram, VI., with lines, representing their proportional mortality for each year of life, and also a line for the mortality from all causes. These lines indicate not only the general progressive course of the disease, but also the extreme fluctuations from year to year.

Tables No. VII., VIII., and IX., give the causes of death arranged according to the nativities of those dying, with the percentage of diseases prevailing in each nationality, and the relative percentage of the native and foreign born for each disease.



### EXPLANATION

The left hand figures represent the Ages.  
 The figures on top the number of deaths for  
 Apoplexy & Typhoid Fever. And for the general  
 Mortality  $\frac{1}{10}$  the actual number.

The Black Line indicates Typhoid Fever.

" Blue " " Apoplexy.

" Red " " The General Mortality.





TABLE VII.

NATIVITY.	Typhoid and Typhus Fevers.	Erysipelas.	Dysentery.	Diarrhea.	Cholera.	Alcoholism.	(Other Zymotic Diseases.	Dropsy.	Cancer.	Consumption.	Other (Constitutional Diseases.	Apoplexy.	Congestion of Brain.	Paralysis, Softening of Brain.	Epilepsy and Convulsions.	Other Diseases of the Nervous System.	Diseases of the Heart.	Other Diseases of the Circulatory System.		
TOTAL.....	5224	334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22
United States.....	3917	280	95	61	62	46	55	19	128	51	59	709	48	215	83	211	23	85	228	15
Canada.....	59	2	1	1	...	...	...	1	4	...	2	13	...	5	1	3	1	1	4	1
England & Wales.....	227	4	5	2	4	2	3	3	14	6	5	24	5	11	7	13	1	8	12	3
Scotland.....	93	2	...	2	2	1	1	1	3	2	1	15	2	13	1	6	1	1	7	...
Ireland.....	238	10	4	5	5	2	3	3	2	6	5	51	2	7	7	8	...	9	16	2
Germany.....	501	31	9	5	3	...	4	3	26	13	17	76	7	43	9	24	5	13	26	1
France.....	31	1	...	1	...	...	...	...	...	...	1	3	1	1	1	3	1	1	2	...
Switzerland.....	20	...	...	...	...	...	...	...	...	...	...	4	1	1	...	3	...	...	...	...
Italy.....	2	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...
Holland.....	7	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...
Denmark.....	9	1	...	1	...	...	...	...	1	...	...	3	...	...	...	...	...	...	...	...
Norway and Sweden.....	8	...	...	...	...	...	...	...	1	1	...	3	...	...	...	1	...	1	...	...
Russia.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poland.....	5	...	...	1	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...
Bohemia.....	5	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	2	...	...	...
Hungary.....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Turkey.....	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
East Indies, Mauritius and Oceanica.....	6	...	...	...	...	...	...	...	1	...	...	2	...	1	...	...	...	...	...	...
West Indies.....	4	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
South America.....	3	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
At Sea.....	2	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
Unknown.....	82	2	1	1	2	1	...	1	2	1	1	14	...	10	1	7	...	...	3	...

TABLE VII.—(Continued.)

NATIVITY.	Total.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleurisy.	Abscesses, Hemorrhages, and Disease of Lungs.	Other Diseases of Respiratory System.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Digestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Urinary System.	Abscesses, Hemorrhages, Old Age, &c.	Debility, Exhaustion, Prostration.	Accidents and Injuries.	Suicides.	Cause unknown or ill-defined.
TOTAL.....	5,224	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61
United States....	3,917	283	52	62	62	21	58	113	37	109	49	30	112	26	35	48	260	47	40
Canada.....	59	3	1	2	2	...	1	...	...	1	1	...	...	...	...	1	5	...	...
England & Wales...	227	15	...	5	3	1	2	7	6	9	5	2	5	4	3	4	19	3	4
Scotland.....	93	5	2	1	1	...	1	3	...	1	2	...	...	...	2	...	8	...	1
Ireland.....	253	18	1	6	5	1	9	2	3	8	1	...	8	1	2	3	13	...	4
Germany.....	504	51	3	8	5	7	4	14	10	14	4	5	9	1	4	2	35	6	4
France.....	31	4	...	...	1	...	1	2	...	1	1	1	1	...	1	...	1	...	1
Switzerland.....	20	3	...	1	1	...	...	...	...	...	...	...	1	...	...	1	3	...	...
Italy.....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Holland.....	7	1	...	...	...	...	...	1	1	...	...	...	1	...	...	...	...	...	...
Denmark.....	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...
Norway and Sweden...	8	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Russia.....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Poland.....	5	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...
Bohemia.....	5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
Hungary.....	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Turkey.....	2	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
East Indies, Mauritius and Oceanica....	6	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
West Indies.....	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...
South America....	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
At Sea.....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Unknown.....	82	3	1	3	1	...	1	2	...	3	...	1	3	1	...	1	5	3	7

TABLE VIII.

NATIVITY.	TOTAL.	Typhoid and Typhus Fever.	Malarial Fever.	Erysipelas.	Dysentery.	Diarrhoea.	Cholera.	Alcoholism.	Other Zymotic Diseases.	Tropics.	Cancer.	Consumption.	Other Constitutional Diseases.	Apoplexy.	Congestion of Brain.	Paralysis, Softening of Brain.	Epilepsy and Convulsions.	Other Diseases of Nervous System.	Diseases of Heart.	(Other Diseases of Circulatory System.
TOTAL.....	5,224	334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22
Percentage.....		6.37	2.22	1.40	1.55	1.01	1.28	0.59	3.45	1.57	1.74	17.61	1.28	5.86	2.11	5.33	0.61	2.28	5.88	0.42
United States..	3,917	280	95	61	62	46	55	19	128	51	59	709	48	215	83	211	23	85	228	15
Percentage.....		7.15	2.42	1.56	1.58	1.17	1.42	0.49	3.27	1.30	1.51	18.10	1.23	5.49	2.12	5.39	.59	2.17	5.82	.38
Germany .....	501	31	9	5	3	.....	4	3	26	13	17	76	7	43	9	24	5	13	26	1
Percentage.....		6.19	1.80	1.00	.60	.....	.80	.60	5.19	2.59	3.39	15.17	1.40	8.58	1.80	4.79	1.00	2.59	5.19	.20
Ireland.....	238	10	4	5	5	2	3	3	8	6	5	51	2	7	7	8	.....	9	16	2
Percentage.....		4.20	1.68	2.10	2.10	.84	1.10	.26	3.36	2.52	2.10	21.43	.84	2.94	2.94	3.36	.....	3.78	6.72	.84
England and Wales....	227	4	5	2	4	2	3	3	14	6	5	24	5	11	7	13	1	8	12	3
Percentage.....		1.76	2.20	.88	1.76	.88	1.34	1.32	6.17	2.64	2.20	10.57	2.20	4.85	3.00	5.43	.....	3.52	5.30	.52
Scotland.....	93	2	.....	2	2	1	1	1	3	2	1	15	2	13	1	6	1	1	7	.....
Percentage.....		2.15	.....	2.15	2.15	.08	.08	.08	3.23	2.15	1.08	16.13	2.15	13.95	1.08	6.45	1.08	1.08	7.53	.....
Other Countries and Unknown	248	7	3	3	5	2	1	2	11	4	4	45	3	18	3	19	2	3	14	1
Percentage.....		4.85	1.21	1.21	2.02	.81	1	.81	4.44	1.61	1.61	18.14	1.21	7.26	1.21	7.66	.81	1.21	5.64	.40
United States..	3,917	280	95	61	62	46	55	19	128	51	59	709	48	215	83	211	23	85	228	15
Percentage.....		7.15	2.42	1.56	1.58	1.17	1.42	0.49	3.27	1.30	1.51	18.10	1.23	5.49	2.12	5.39	.59	2.17	5.82	.38
Foreign .....	1,307	54	21	17	19	7	12	12	62	31	32	211	19	92	27	70	9	34	75	7
Percentage.....		12.52	16.17	10.13	10.13	5.11	5.11	5.11	16.17	8.05	10.22	33.28	5.11	25.07	18.51	32.28	13.28	28.57	33.28	5.11



TABLE VIII.—(Continued.)

NATIVITY.	Total.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleurisy.	Abscesses, Hemorrhages, and Inflammation of Lungs.	(Other) Diseases of Respiratory System.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Digestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Urinary System.	Abscesses, Hemorrhages, Old Age, etc.	Debility, Prostration and Exhaustion.	Accidents and Injuries.	Suicides.	Causes unknown or ill-defined.
TOTAL.....	5,224	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61
Percentage....		7.43	1.17	1.68	1.55	.57	1.47	2.76	1.09	2.81	1.21	.77	2.78	.63	.92	1.17	6.83	1.13	1.17
United States....	3,917	283	52	62	62	21	58	113	37	109	49	30	112	26	35	48	260	47	40
Percentage....		7.22	1.33	1.58	1.58	.54	1.48	2.88	.94	2.78	1.25	.77	2.86	.66	.89	1.22	6.63	1.20	1.02
Germany.....	501	51	3	8	5	7	4	14	10	14	4	5	9	1	4	2	35	6	4
Percentage....		10.18	.60	1.60	1.00	1.40	.80	2.79	2.00	2.79	.80	1.00	1.80	.20	.80	.40	6.99	1.20	.80
Ireland.....	238	18	1	6	5	1	9	2	3	8	1	....	8	1	2	3	13	....	4
Percentage....		7.56	.42	2.52	2.10	.42	3.78	.84	1.26	3.36	.42	....	3.36	.42	.84	1.26	5.46	....	1.68
England & Wales.	227	13	....	5	3	1	2	7	6	9	5	2	5	4	3	4	19	3	4
Percentage....		5.73	....	2.20	1.32	.44	.88	3.08	2.64	3.97	2.20	.88	2.20	1.76	1.32	1.76	8.37	1.32	1.76
Scotland.....	93	5	2	1	1	....	1	3	....	1	2	....	5	....	2	....	8	....	1
Percentage....		5.37	2.15	1.08	1.08	....	1.08	3.23	....	1.08	2.15	....	5.37	....	2.15	....	8.60	....	1.08
Other Countries (and Unknown)	248	18	3	6	5	....	3	5	1	6	2	3	6	1	2	4	22	3	8
Percentage....		7.26	1.21	2.42	2.02	....	1.21	2.02	.40	2.42	.81	1.21	2.42	.40	.81	1.61	8.87	1.21	2.42
United States....	3,917	283	52	62	62	21	58	113	37	109	49	30	112	26	35	48	260	47	40
Percentage....		7.22	1.33	1.58	1.58	.54	1.48	2.88	.94	2.78	1.25	.77	2.86	.66	.89	1.22	6.63	1.20	1.02
Foreign.....	1,307	105	9	26	19	9	19	31	20	38	14	10	33	7	13	13	97	12	21
Percentage....		27.06	1.47	5.53	4.63	3.00	4.68	5.83	3.00	8.52	3.83	3.33	7.62	2.17	3.83	3.12	11.27	1.27	3.44

TABLE IX.

NATIVITY.	Total.	Typhoid and Typhus Fevers.	(Other Zymotic Diseases.	Consumption.	Cancer.	(Other Constitutional Diseases.	Apoplexy.	(Other Diseases of Nervous System.	Diseases of Circulatory System.	Pneumonia.	(Other Diseases of Respiratory System.	Diseases of Digestive System.	Diseases of Urinary System.	Accidents and Suicides.	Unclassified (including Old Age).
TOTAL.....	5,224	334	616	920	91	149	397	542	325	388	260	488	218	416	170
Percentage.....		6.39	11.79	17.61	1.74	2.85	5.88	10.38	6.22	7.43	4.98	9.34	4.17	7.96	3.25
United States.....	3,917	280	466	709	59	99	215	402	243	283	197	366	168	307	123
Percentage.....	74.98	7.15	11.90	18.10	1.51	2.53	5.49	10.26	6.20	7.22	5.03	9.34	4.29	7.84	3.14
Germany.....	501	31	50	76	17	20	43	51	27	51	23	46	15	41	10
Percentage.....	9.59	6.19	9.98	15.17	3.39	3.99	8.58	10.18	5.39	10.18	4.59	9.18	2.99	8.18	2.00
Ireland.....	238	10	30	51	5	8	7	24	18	18	13	23	9	13	9
Percentage.....	4.56	4.20	12.60	21.43	2.10	3.36	2.94	10.08	7.56	7.56	5.46	9.66	3.78	5.46	3.78
England and Wales.....	227	4	33	24	5	11	11	29	15	13	9	29	11	22	11
Percentage.....	4.35	1.76	14.54	10.57	2.20	4.85	4.85	12.78	6.61	5.73	3.97	12.78	4.85	9.69	4.85
Scotland.....	93	2	10	15	1	4	13	9	7	5	4	7	5	8	3
Percentage.....	1.78	2.15	10.75	16.13	1.08	4.30	13.98	9.68	7.53	5.37	4.30	7.53	5.37	8.60	3.23
Other Countries and Unknown.....	248	7	27	45	4	7	18	27	15	18	14	17	10	25	14
Percentage.....	4.75	2.82	10.89	18.14	1.61	2.82	7.26	10.89	6.05	7.26	5.65	6.85	4.03	10.08	5.65

Of the entire mortality, those born in the United States give 75 per cent.; Germany,  $9\frac{1}{2}$ ; Ireland,  $4\frac{1}{2}$ ; England,  $4\frac{1}{2}$ ; Scotland,  $1\frac{1}{4}$  per cent. Total, United States, 75; Foreign-born, 25 per cent. The circumstance of nativity seems, in the large majority of cases, to have very little influence on the cause of death, and it is remarkable how slight a variation from the seventy-five per cent. there is for most of the diseases. The following exceptions seem most noteworthy: In typhoid and malarial fevers, diarrhoea, cholera, and pneumonia, the percentage of the United States rises to or above eighty, and in cancer, alcoholism, dropsy and peritonitis it falls below seventy per cent.

The deaths from alcoholism are chiefly among foreigners, and in the following order of nationality: England, Ireland, Scotland and Germany.

Consumption varies considerably; it gives the largest proportional mortality among the natives of Ireland, and the smallest among the English.

Apoplexy gives the largest percentage among the Scotch, and the smallest among the Irish, and the same holds good for diseases of the nervous system in general.

The foreign-born give a much higher mortality from cancer than natives; 35.17 per cent. instead of the usual average of 25. Among foreigners, the Germans give the highest proportion and the Scotch the lowest.

Heart diseases prevail almost uniformly among all nationalities.

For diseases of the digestive organs, Ireland gives the largest percentage of diseases of the stomach, and the smallest for diseases of the bowels.

Scotland gives the largest proportion of diseases of the kidneys.

Accidental deaths occur equally among all nationalities. The native born, the Germans, and the English give nearly the same proportion of suicides. The Irish and Scotch do not afford a single instance.

The deaths among persons of other nationalities than those above



TABLE X.

RESIDENCE AT DEATH.	Total.																																					
	Typhoid and Typhus Fever.	Malarial Fevers.	Erysipelas.	Dysentery.	Diarrhea.	Cholera.	Alcoholism.	Other Zymotic Dis- eases.	Dropsy.	Cancer.	Consumption.	Other Constitutional Diseases.	Apoplexy.	Congestion of Brain.	Paralysis, Softening, and Disease of Brain.	Epilepsy and Convul- sions.	Other Diseases of the Nervous System.	Diseases of Heart.	Other Diseases of Cir- culatory System.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleu- risy.	Abscess, Hemorrhage, and Disease of Lungs.	Other Diseases of Res- piratory System.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Di- gestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Uti- nary System.	Abscess, Hemorrhage, Old Age, etc.	Prostration, Exhaus- tion, and Debility.	Accidents, Injuries, etc.	Suicides.	Cause unknown or ill-defined.	
TOTAL.....	5,224	334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	19
Maine.....	59	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New Hampshire.....	36	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Vermont.....	37	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Massachusetts.....	424	30	4	5	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Rhode Island.....	73	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Connecticut.....	197	18	4	5	6	1	2	2	8	9	48	3	10	8	7	10	5	16	3	13	7	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
New York.....	1,471	90	22	25	11	16	15	9	46	27	27	202	23	99	37	88	4	43	6	102	22	28	24	12	15	32	23	30	14	13	66	11	17	20	58	18	12	
New Jersey.....	330	14	9	1	2	4	2	1	10	4	9	65	5	25	5	19	2	5	31	1	24	0	4	7	2	15	3	0	3	3	8	14	2	14	2	1	1	
Pennsylvania.....	406	33	11	5	4	4	5	2	18	6	9	77	5	26	15	18	4	9	17	2	29	2	7	5	5	6	12	7	14	3	3	11	2	11	17	3	3	
Delaware.....	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Maryland.....	96	4	2	3	3	1	1	3	1	1	1	1	1	4	2	10	1	4	1	11	2	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
District of Columbia.....	27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Virginia.....	84	3	2	1	3	2	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
West Virginia.....	13	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
North Carolina.....	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
South Carolina.....	28	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Georgia.....	48	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Florida.....	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Alabama.....	31	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mississippi.....	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Louisiana.....	42	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Texas.....	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Ohio.....	284	23	5	3	2	8	2	5	53	15	4	3	8	15	4	8	10	12	1	24	5	8	4	4	1	4	11	5	8	1	1	1	1	1	1	1	1	1
Indiana.....	111	14	5	3	3	2	2	1	18	13	4	3	2	13	4	0	3	0	10	16	1	2	2	1	1	3	10	6	3	3	1	1	1	1	1	1	1	1
Illinois.....	227	21	10	2	5	3	5	2	37	13	4	0	2	7	4	0	2	0	22	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Michigan.....	133	7	2	1	2	1	2	1	22	4	2	2	1	4	2	3	1	5	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Wisconsin.....	119	9	4	7	5	2	1	1	22	1	4	2	1	4	2	3	1	5	13	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Iowa.....	71	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Minnesota.....	43	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	

TABLE X.—(Continued.)

RESIDENCE AT DEATH.	Cause of Death.																																						
	Typhoid and Typhus Fever.	Malarial Fevers.	Erysipelas.	Dysentery.	Diarrhea.	Cholera.	Alcoholism.	Other Zymotic Diseases.	Dropsy.	Cancer.	Consumption.	Other Constitutional Diseases.	Apoplexy.	Congestion of Brain.	Paralysis, Softening, and Disease of Brain.	Epilepsy and Convulsions.	Other Diseases of the Nervous System.	Diseases of Heart.	Other Diseases of Circulatory System.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleurisy.	Abscess, Hemorrhage, and Disease of Lungs.	Other Diseases of Respiratory System.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Digestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Urinary System.	Abscess, Hemorrhage, Old Age, etc.	Debility, Exhaustion, and Prostration.	Accidents, Injuries, etc.	Suicides.	Cause unknown or ill-defined.		
Kentucky	2	2	2	1	1	1	1	1	1	1	1	1	2	0			4	1	1	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Transverse	36	1	8	1	2	2	2	7	2	2	14	2	2	0			3	5	5	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Missouri	143	1	8	103	6	1	1	7	2	14	5	1	2	0			3	1	5	6	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Arkansas	20			1																																			
Illinois	20	4	2	1				1			1						2		1	4																			
Nebraska	14										1																												
Montana	4	2																																					
Colorado	7										3																												
Utah	7																																						
Idaho	1		1																																				
Washington Territory	18	7	7			5	2	9	4	44			1	1			5	18	1	16	2	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Oregon	7	1	1			1		1		1																													
Washington Territory	2	1	1			1		1		1																													
Idaho	1	1	1			1		1		1																													
Western Lakes and Rivers	4	2	1			1		1		1			4	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Canada	36					1	2	1			4		4	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Mexico	1																																						
Central America	5	1				2		2																															
South America	2	1				1		1																															
West Indies and Bermudes.	3					1		1		2																													
Europe	4	2	1	1		1	1	1	1	14	1		4	1	1		1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Sanfwich Islands	1																																						
Japan	1																																						
Oceania	1																																						
At Sea	12	2																																					
Unknown	12																																						

TABLE XI.

RESIDENCE AT DEATH.	DISEASES.																			
	Typhoid and Typhus Fever.	Malarial Fever.	Erysipelas.	Dysentery.	Diarrhoea.	Cholera.	Alcoholism.	Other Zymotic Diseases.	Dropsy.	Cancer.	Consumption.	Other Constitutional Diseases.	Apoplexy.	Congestion of Brain.	Paralysis, Softening, Epilepsy and Convulsions.	Other Diseases of the Nervous System.	Diseases of Heart.	Other Diseases of Circulatory System.		
TOTAL.....	5,224	334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22
Percentage.....	6.39	2.22	1.49	1.55	1.01	1.28	.59	3.64	1.57	1.74	17.61	1.28	5.88	2.11	5.38	.61	2.28	5.80	.42	
Maine to Connecticut.....	826	59	12	12	12	6	3	2	24	13	22	166	17	49	10	48	10	16	53	4
Percentage.....	15.81	7.14	1.45	1.45	1.45	.73	.36	.24	2.91	1.57	2.66	20.10	2.66	5.93	1.21	5.81	2.1	1.94	6.41	.48
New York.....	1,471	90	22	25	11	16	15	9	46	27	27	262	23	99	37	88	4	43	98	6
Percentage.....	28.16	6.11	1.49	1.70	.74	1.08	1.02	.61	3.12	1.84	1.84	17.81	1.56	6.73	2.51	5.98	.27	2.92	6.66	.41
New Jersey and Pennsylvania	736	47	20	6	6	8	7	3	28	10	18	142	10	51	20	37	6	14	48	1
Percentage.....	14.09	6.38	2.71	.81	.81	1.08	.95	.41	3.80	1.36	2.44	19.29	1.36	6.93	2.71	5.03	.81	1.90	6.52	.14
Delaware to Texas.....	431	13	12	5	5	14	7	2	27	.6	5	70	2	21	7	27	5	6	19	2
Percentage.....	8.25	3.01	2.78	1.16	1.16	3.25	1.62	.46	6.26	1.39	1.16	16.24	4.64	8.71	1.62	6.26	1.16	1.39	4.41	.46
Ohio, Indiana and Illinois.....	622	58	21	10	2	13	7	19	12	6	108	3	34	11	19	2	16	25	3	
Percentage.....	11.91	9.32	3.37	1.61	1.61	3.22	2.09	1.12	3.05	1.93	.96	17.36	48.5	4.61	7.73	.05	3.2	2.57	4.02	.48
Michigan to Minnesota.....	366	27	7	8	11	4	4	2	9	4	5	71	4	15	11	17	2	6	22	1
Percentage.....	7.00	7.38	1.91	2.19	3.00	1.09	1.09	.55	2.46	1.09	1.37	19.40	1.09	4.10	3.00	4.64	55	1.64	6.01	.27
Kentucky, Tennessee, Missouri and Arkansas.....	254	12	10	2	15	2	9	...	21	3	3	28	5	14	8	16	...	7	10	...
Percentage.....	4.86	4.72	3.94	.79	5.90	.79	3.54	...	8.27	1.18	1.18	11.02	1.97	5.51	3.15	6.30	...	2.76	3.94	...
California and Oregon.....	280	19	7	7	7	...	5	3	9	5	4	45	2	14	1	18	...	5	18	4
Percentage.....	5.36	6.79	2.50	2.50	2.50	...	1.78	1.07	3.21	1.78	1.43	16.07	71	5.00	.36	6.43	...	1.78	6.43	1.43
Other West'n States & Territories.....	671	6	3	1	1	...	1	...	2	...	...	5	...	...	3	2	...	4	2	...
Percentage.....	1.28	8.95	4.48	1.49	1.49	...	1.49	...	2.98	...	7.46	...	...	...	4.48	2.98	...	5.97	2.98	...
Foreign Countries & Unknown	171	3	2	2	3	1	3	3	5	2	1	23	1	10	2	9	3	2	8	1
Percentage.....	3.27	1.75	1.17	1.17	1.75	.58	1.75	1.75	2.92	1.17	.58	13.45	.58	5.85	1.17	5.26	1.75	1.17	4.68	.58



TABLE XI.—(Continued.)

RESIDENCE AT DEATH.																				
Total.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleu- risy.	Abscess, Hemorrhage, and Disease of Lungs.	Other Diseases of Res- piratory System.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Di- gestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Uri- nary System.	Abscess, Hemorrhage, Old age, etc.	Debility, Prostration, and Exhaustion.	Accidents and In- juries.	Suicides.	Cause unknown or ill-defined.	61	
																				5,224
TOTAL . . . . .	5,224	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61	1.17
Percentage.		7.43	1.17	1.68	1.55	.57	1.47	2.76	1.09	2.61	1.21	.77	2.78	.63	.92	1.17	6.84	1.13	1.17	
Maine to Connecticut . . . . .	826	65	7	14	9	3	12	11	7	24	5	12	26	5	11	5	57	8	7	
Percentage.		7.86	.84	1.69	1.08	.36	1.45	1.33	.84	2.69	.66	1.45	3.14	.61	1.33	.60	6.90	.97	.84	
New York . . . . .	1,471	102	22	28	24	12	15	32	23	36	14	13	66	11	17	20	58	18	12	
Percentage.		6.93	1.49	1.90	1.63	.82	1.02	2.17	1.56	2.45	.93	.88	4.49	.74	1.14	.76	3.96	1.22	.82	
New Jersey and Pennsylvania . . . . .	736	53	8	11	12	5	8	27	10	23	6	5	21	3	8	14	31	5	4	
Percentage.		7.20	1.09	1.49	1.63	.68	1.09	3.67	1.35	3.11	.81	.68	2.85	.43	.88	.73	4.21	.68	.54	
Delaware to Texas . . . . .	431	31	6	8	9	2	13	15	...	11	11	1	7	3	3	7	39	4	6	
Percentage.		7.19	.30	1.85	.99	.46	3.01	3.48	...	2.55	2.55	.23	1.62	.70	.66	.90	9.05	.93	.89	
Ohio, Indiana and Illinois . . . . .	622	62	9	12	9	1	8	26	8	20	9	4	9	4	3	5	42	6	6	
Percentage.		9.97	1.45	1.93	1.45	.16	2.91	4.18	1.29	3.20	.75	.64	1.45	.61	.48	.80	6.75	.94	.96	
Michigan to Minnesota . . . . .	366	30	2	6	5	1	8	15	3	11	5	3	4	3	2	2	26	10	...	
Percentage.		8.19	.55	1.64	1.37	.27	2.19	4.10	.82	3.00	.37	.82	1.09	.24	.35	.35	7.10	2.73	...	
Kentucky, Tennessee, Missouri, and Arkansas . . . . .	254	17	4	1	4	...	6	6	2	5	6	...	1	1	2	3	31	...	...	
Percentage.		6.69	.57	.39	.57	...	2.36	2.36	.79	1.97	2.36	...	.39	.39	.79	1.18	12.20	...	...	
California and Oregon . . . . .	280	16	2	4	5	2	3	6	...	9	4	1	9	2	1	3	31	6	3	
Percentage.		5.71	.71	1.43	1.78	.71	1.07	2.14	...	3.21	1.43	.36	3.21	.71	.80	.97	11.07	2.14	1.07	
Other West'n States & Territories . . . . .	67	7	...	1	2	1	1	3	2	3	1	...	...	...	...	1	15	...	...	
Percentage.		10.45	...	.49	.81	.49	1.49	4.48	2.98	4.48	1.49	...	...	...	...	.49	22.30	...	...	
Foreign Countries and Unknown . . . . .	171	5	1	3	2	3	3	3	2	5	2	1	2	1	1	1	27	2	23	
Percentage.		2.92	.58	1.75	1.17	1.75	1.75	1.75	1.17	2.92	1.17	.58	1.17	.58	.58	.58	15.79	1.17	4.13	

TABLE XII.

RESIDENCE AT DEATH.															
	TOTAL.	Typhus and Typhoid Fevers.	Other Zymotic Diseases.	Consumption.	Cancer.	Other Constitutional Diseases.	Apoplexy.	Other Diseases of the Nervous System.	Diseases of the Circulatory System.	Pneumonia.	Other Diseases of the Respiratory System.	Diseases of the Digestive System.	Diseases of the Urinary System.	Accidents and Suicides.	Unclassified, (including Old Age).
TOTAL.....	5,224	334	616	920	91	149	397	542	325	388	260	488	218	416	170
Percentage.....	.....	6.39	11.79	17.61	1.74	2.85	5.88	10.38	6.22	7.43	4.98	9.34	4.17	7.96	3.25
Maine to Connecticut.....	826	59	71	166	22	30	49	84	57	65	33	59	43	65	23
Percentage.....	15.81	7.14	8.60	20.09	2.66	3.63	5.93	10.17	6.90	7.87	3.99	7.14	5.21	7.87	2.78
New York.....	1,471	90	144	262	27	50	99	172	104	102	86	120	90	76	49
Percentage.....	28.16	6.11	9.79	17.81	1.84	3.40	6.73	11.69	7.07	6.93	5.84	8.16	6.12	5.17	3.33
New Jersey and Pennsylvania.....	736	47	78	142	18	20	51	77	49	53	36	74	29	36	26
Percentage.....	14.09	6.38	10.60	19.29	2.44	2.71	6.93	10.47	6.31	7.20	4.69	10.85	3.94	4.89	3.53
Delaware to Texas.....	431	13	72	70	5	8	21	45	21	31	25	50	11	43	16
Percentage.....	8.25	3.01	16.70	16.24	1.16	1.85	4.87	10.44	4.87	7.19	5.80	11.60	2.55	9.97	3.71
Ohio, Indiana and Illinois.....	622	58	82	108	6	15	34	48	28	62	31	71	17	48	14
Percentage.....	11.91	9.32	13.18	17.36	.96	2.41	5.46	7.72	4.50	9.97	4.98	11.41	2.73	7.72	2.25
Michigan to Minnesota.....	366	27	45	71	5	8	15	36	23	30	14	42	10	36	4
Percentage.....	7.00	7.38	12.29	19.40	1.37	2.19	4.11	9.84	6.32	8.16	3.33	11.47	3.73	9.44	1.66
Kentucky, Tennessee, Missouri and Arkansas.....	254	12	59	28	3	8	14	31	10	17	9	25	2	31	5
Percentage.....	4.86	4.72	23.23	11.02	1.18	3.15	5.51	12.20	3.94	6.69	3.54	9.84	.79	12.20	1.97
California and Oregon.....	280	19	38	45	4	7	14	24	22	16	13	22	12	37	7
Percentage.....	5.36	6.79	13.57	16.07	1.43	2.50	5.00	8.57	7.86	5.71	4.64	7.86	4.29	13.21	2.50
Other West'n States & Territories.....	67	6	8	5	.....	.....	.....	9	2	7	4	10	.....	15	1
Percentage.....	1.28	8.95	11.94	7.40	.....	.....	.....	13.13	3.38	10.45	3.07	13.97	.....	31.30	1.40
Foreign Countries and Unknown.....	171	3	19	23	1	3	10	16	9	5	9	15	4	29	25
Percentage.....	3.27	1.75	11.11	13.45	.58	1.75	5.85	9.36	5.26	2.92	5.26	8.15	2.34	16.96	14.62

mentioned have been too few to form a basis for any calculations. In the list nearly every European country is represented, also the East and West Indies, Canada, and South America, in numbers varying from two (Hungary) to thirty-one (France).

Tables X., XI., XII., show the causes of death, and residences at time of death. In the first table each state and territory and foreign country is enumerated, with the numbers dying of each disease, while in the second and third, they are consolidated. The states have been grouped according to geographical position and the number of cases they give, and the diseases consolidated into the same groups as previously.

The states are grouped as follows:

- 1st. The New England States.
- 2d. New York.
- 3d. New Jersey and Pennsylvania.
- 4th. Delaware to Texas, embracing all the Southern States except those mentioned in seventh group.
- 5th. Ohio, Indiana, and Illinois.
- 6th. Michigan, Wisconsin, Iowa, and Minnesota.
- 7th. Kentucky, Tennessee, Missouri, and Arkansas.
- 8th. California and Oregon.
- 9th. The remaining Western States and Territories.
- 10th. Foreign countries and unknown.

The last group is too extensive and the cases too few in any one country, for any useful comparison, and therefore our remarks will refer solely to the others.

Typhoid fever extends over all sections of the country with the least mortality in the Southern states, and with the greatest mortality in the Western, Northwestern and New England states. Malarial fevers least in New England and New York, and extensively in the Western states. Of both these diseases the Pacific states give an average percentage of mortality. Of the other zymotic diseases, the New Eng-



land states give a mortality a little under the average. The middle and Pacific states closely approximate it, and the Southern and Western states exceed it—probably owing to the deaths from cholera and yellow fever. Kentucky, Tennessee, and Missouri and the Northwestern and Pacific states give by far the largest proportion of dysentery.

Consumption averages nearly the same in all sections of the country, varying most where the figures are smallest and consequently least reliable. The percentage on the total mortality being 17.61, the extreme variations are 20.09 in the New England states, and 7.46 in the extreme Western states and territories. Kentucky, Tennessee and Missouri also give a comparatively small mortality from this disease.

The deaths from apoplexy vary little according to the section of the country, being a little above the average in New York, New Jersey, and Pennsylvania, and below it in the Southern and Northwestern states. The percentage on the total mortality is 5.88, for New Jersey and Pennsylvania 6.93, for the Northwestern states, 4.10. However, in the latter the proportion of deaths from congestion of the brain is above the average. For other diseases of the brain California gives a proportion a little above the average.

The percentage for diseases of the heart and circulatory system being 6.22 of the total mortality, California gives the highest proportion, 7.86; New York 7.07, and Kentucky, etc., 3.94.

Pneumonia gives a percentage on total mortality of 7.43, and as occurring locally with the following extremes: Western states and territories, 10.45; California and Oregon, 5.71.

There is no evident reason for this extreme difference occurring under such similar circumstances, and it is most probably owing to the small number of cases from which the calculations are made. Of the other sections, New York gives a percentage below the average, and Ohio, Indiana, and Illinois above it.

For diseases of the digestive organs, New England, New York, and California give a proportion below the average, while the Southern,



TABLE XIII.—(Continued.)

DEATHS DURING YEAR OF INSURANCE.	Total.	Pneumonia.	Congestion of Lungs.	Bronchitis and Pleurisy.	Abscess, Hemor- rhage, and Dis- ease of Lungs.	Other Diseases of Respiratory Sys- tem.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Digestive System.	Diabetes.	Diseases of Kid- neys.	Other Diseases of Urinary System.	Abscess, Hemor- rhage, Old Age, etc.	Debility, Prostra- tion, and Ex- haustion.	Accidents and In- juries.	Suicides.	Cause unknown or ill-defined.
TOTAL.....	5224	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61
1st year.....	534	47	8	7	11	3	7	24	7	10	5	2	7	1	1	1	62	13	4
2d ".....	583	41	7	9	12	5	13	19	5	12	8	3	7	2	2	7	53	5	3
3d ".....	550	39	5	5	12	6	9	25	12	19	7	3	15	1	4	6	38	6	5
4th ".....	551	46	5	16	4	1	7	10	5	16	4	3	8	4	7	8	42	11	3
5th ".....	489	37	4	10	10	3	6	15	9	17	4	5	10	3	3	1	31	5	6
6th ".....	418	31	5	2	6	...	4	7	3	9	5	3	15	2	1	3	24	3	3
7th ".....	321	19	4	7	5	2	5	4	3	14	3	3	9	1	5	4	26	3	3
8th ".....	242	24	2	7	7	...	6	6	2	5	...	5	7	2	1	8	20	2	3
9th ".....	157	7	1	2	9	...	1	7	...	6	3	1	7	1	2	3	4	1	1
10th ".....	175	15	2	1	4	1	...	3	3	4	1	1	4	2	2	...	5	1	3
11th ".....	128	7	4	4	2	1	1	3	1	6	3	...	4	...	2	...	8	...	1
12th ".....	137	10	3	3	...	2	2	2	...	2	2	...	3	...	2	...	11	...	...
13th ".....	87	4	1	1	...	1	1	3	...	4	1	...	4	...	2	...	...	...	...
14th ".....	98	3	1	2	2	1	2	2	1	1	2	1	3	...	1	3	4	1	1
15th ".....	85	6	...	1	1	1	3	1	2	2	1	1	4	2	...	1	10	2	1
16th ".....	84	6	2	1	...	1	...	...	2	2	2	2	5	3	...	...	2	...	...
17th ".....	90	5	3	...	...	...	2	4	...	4	3	...	5	3	...	2	4	...	1
18th ".....	59	4	2	2	...	...	1	2	...	1	...	...	4	1	...	2	1	2	...
19th ".....	70	8	1	...	2	...	1	2	1	4	...	...	4	1	...	...	1	1	...
20th ".....	49	4	...	...	...	...	1	1	1	2	...	...	...	...	2	2	1	...	...
21st ".....	41	5	...	...	...	1	1	2	1	2	1	...	2	1	2	...	1	...	...
22d ".....	54	6	...	2	...	1	2	1	1	3	1	2	2	1	2	1	3	1	...
23d ".....	53	9	...	1	...	...	2	1	1	1	1	1	3	...	2	1	2	...	...
24th ".....	38	2	2	3	1	1	...	1	1	1	...	1	1	1	3	...	...	1	...
25th ".....	42	4	...	...	...	1	...	...	1	1	2	1	2	1	1	1	1	1	...
26th ".....	19	...	...	...	...	...	1	...	...	1	1	1	1	1	1	1	...	...	...
27th ".....	21	2	...	1	...	...	1	1	...	...	1	...	3	...	...	...	...	...	...
28th ".....	8	...	1	1	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
29th ".....	6	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...
30th ".....	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31st ".....	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...
Unknown.....	22	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	22



TABLE XIV.

DEATHS DURING YEAR OF INSURANCE.	DISEASES.														TOTAL.					
	Typhoid and Typhus Fever.	Malarial Fevers.	Erysipelas.	Dysentery.	Diarrhoea.	Cholera.	Alcoholism.	Other Zymotic Dis- eases.	Dropsy.	Cancer.	Consumption.	Other Constitutional Diseases.	Apoplexy.	Congestion of Brain.		Paralysis, Softening, and Disease of Brain.	Epilepsy and Convul- sions.	Other Diseases of Ner- vous System.	Diseases of Heart.	Other Diseases of Cir- culatory System.
TOTAL.....	334	116	78	81	53	67	31	190	82	91	920	67	307	110	281	32	119	303	22	
Percentage .....	6.39	2.22	1.49	1.55	1.01	1.28	.59	3.64	1.57	1.74	17.64	1.28	5.88	2.11	5.38	.61	2.28	5.80	.42	
1st Year.....	534	63	18	6	13	6	19	6	30	5	7	43	2	35	14	13	2	11	17	4
Percentage.....	10.22	11.80	3.37	1.12	2.43	1.12	3.56	1.12	5.62	.93	1.31	8.05	.37	6.55	2.62	2.43	.37	2.06	3.18	.75
2d Year.....	583	62	22	6	17	5	12	4	29	7	3	102	7	20	10	25	4	12	22	
Percentage .....	11.16	10.63	3.77	1.03	2.92	.86	2.06	.68	4.97	1.20	.51	17.50	1.20	3.43	1.71	4.29	.68	2.06	3.77	.17
2d to 5th Year....	1,600	96	28	23	25	10	20	8	59	22	14	360	22	86	31	76	10	38	77	3
Percentage.....	30.62	6.00	1.75	1.44	1.56	.62	1.25	.50	3.69	1.37	.87	22.50	1.37	5.37	1.94	4.75	.62	2.37	4.81	.19
5th to 10th Year..	1,313	75	26	22	14	11	10	6	41	19	36	268	17	74	32	73	7	32	83	8
Percentage .....	25.13	5.71	1.98	1.07	1.07	.84	.76	.40	3.12	1.45	2.74	20.41	1.29	5.63	2.44	5.56	.53	2.44	6.32	.61
Above 10 Years..	1,172	38	22	21	12	21	6	7	31	29	31	147	19	92	23	94	9	26	104	6
Percentage.....	22.43	3.24	1.88	1.79	1.02	1.79	.51	.60	2.64	2.47	2.64	12.54	1.62	7.85	1.96	8.02	.77	2.22	8.88	.51

TABLE XIV.—(Continued.)

DEATHS DURING YEAR OF INSURANCE.	Total.	Pneumonia.	Congestion of Lungs.	Pleuritis and Pleurisy.	Abscesses, Hemorrhages, and Diseases of Lungs.	Other Diseases of Respiratory System.	Diseases of Stomach.	Diseases of Bowels.	Peritonitis.	Diseases of Liver.	Other Diseases of Digestive System.	Diabetes.	Diseases of Kidneys.	Other Diseases of Urinary System.	Abscesses, Hemorrhages, Old Age, &c.	Debility, Prostration, and Exhaustion.	Accidents and Injuries.	Suicides.	Cause unknown or ill-defined.
TOTAL.....	5,224	388	61	88	81	30	77	144	57	147	63	40	145	33	48	61	357	59	61
Percentage.....	7.43	1.17	1.17	1.68	1.55	.57	1.47	2.76	1.09	2.81	1.21	.77	2.78	.63	.92	1.17	6.84	1.13	1.17
1st Year.....	534	47	8	7	11	3	7	24	7	10	5	2	7	1	1	1	62	13	4
Percentage.....	10.22	8.80	1.50	1.31	2.06	.56	1.31	4.49	1.31	1.87	.93	.37	1.31	.19	.19	.19	11.61	2.43	.75
2d Year.....	583	41	7	9	12	5	13	19	5	12	8	3	7	2	2	7	53	5	3
Percentage.....	11.16	7.03	1.20	1.54	2.06	.86	2.23	3.26	.86	2.06	1.37	.51	1.20	.34	.34	1.20	9.09	.86	.51
2d to 5th Year...	1,600	122	14	31	22	10	22	50	26	52	15	11	33	8	14	15	111	22	14
Percentage.....	30.62	7.62	.87	1.94	1.37	.62	1.37	3.12	1.62	3.25	.94	.69	2.06	.50	.87	.94	6.94	1.37	.87
5th to 10th Year	1,313	96	14	19	24	3	16	27	10	36	13	13	46	8	11	21	79	10	13
Percentage.....	25.13	7.31	1.07	1.45	1.83	.23	1.22	2.06	.76	2.74	.99	.99	3.50	.61	.84	1.60	6.02	.76	.99
Above 10 Years..	1,172	82	18	22	12	9	19	24	9	37	22	11	52	14	20	17	52	9	5
Percentage.....	22.43	7.00	1.54	1.88	1.02	.77	1.62	2.05	.77	3.16	1.88	.94	4.44	1.16	1.71	1.45	4.44	.77	.43
Unknown.....																			22

TABLE XV.

YEAR OF INSURANCE.	Total.	Typhoid and Typhus Fevers.	Other Zymotic Diseases.	Consumption.	Cancer.	Other Constitutional Diseases.	Apoplexy.	Other Diseases of Nervous System.	Diseases of Circulatory System.	Pneumonia.	Other Diseases of Respiratory System.	Diseases of Digestive System.	Diseases of Urinary Organs.	Accidents and Self-Suicides.	Unclassified (including Old Ages).
TOTAL.....	5,224	334	616	920	91	149	307	542	325	388	260	488	218	416	170
Percentage .....		6.39	11.79	17.61	1.74	2.85	5.88	10.38	6.22	7.43	4.98	9.34	4.17	7.20	3.25
1st Year.....	534	63	98	43	7	7	35	40	21	47	29	53	10	75	6
Percentage .....		11.80	18.35	8.05	1.31	1.31	6.55	7.49	3.93	8.80	5.43	9.93	4.57	14.04	1.12
2d Year.....	583	62	95	102	3	14	20	51	23	41	33	57	12	58	12
Percentage .....		10.63	16.29	17.50	.51	2.40	3.43	8.75	3.94	7.03	5.66	9.78	2.06	9.95	2.06
2d to 5th Year.....	1,600	96	173	360	14	44	86	155	80	122	77	165	52	133	43
Percentage .....		6.00	10.81	22.50	.87	2.75	5.37	9.69	5.00	7.62	4.81	10.31	3.25	8.31	2.69
5th to 10th Year.....	1,313	75	130	268	36	36	74	144	91	96	60	102	67	89	45
Percentage .....		5.71	9.90	20.41	2.74	2.74	5.63	10.97	6.93	7.31	4.57	7.77	5.10	8.18	3.43
Above 10 Years.....	1,172	38	120	147	31	48	92	152	110	82	61	111	77	61	42
Percentage .....		3.24	10.24	12.54	2.64	4.09	7.85	12.97	9.39	6.99	5.12	9.11	6.57	5.03	3.58
Unknown.....		...	...	...	...	...	...	...	...	...	...	...	...	...	22







Western, and Northwestern States give a proportion much above it. The reverse is the case with diseases of the kidneys, in which the first mentioned States run above the average, while the Western States fall below it.

Of deaths from accidents and injuries the proportion on the total mortality is 6.83 per cent., and of this class of causes of death New York gives the smallest proportion, 3.94, and the extreme Western States and Territories the largest, 22.39 per cent. California and Oregon give 11.07, and Kentucky, Tennessee and Missouri, 12.20.

The total number of suicides is 59, and the percentage on the total 1.13, which is exceeded in New York (1.22), the Northwestern (2.73), and the Pacific States (2.14), while in the other sections of the country it falls below.

We will now consider in tables XIII., XIV. and XV., the causes of deaths arranged and consolidated, with the numbers and proportions of each for every year of insurance.

These tables should be among the most important, as we might expect to find from them the influence and effect of the original medical examinations of applicants. We have grouped them into five divisions; the first consisting of those who die in the first year of insurance only; the second those who die in the second year; the third, from the third to fifth year, both inclusive; the fourth, from the fifth to the tenth year; and the fifth, those who have been insured above ten years. It might be presumed that all those who were suffering from any disease, had been rejected by the medical examiner at the time of insurance, but in practice it will be found that in some few cases the existence of disease has been overlooked either by the carelessness of the examiner or the false statements and concealment of symptoms on the part of the applicant. Thus, alcoholism and cancer give a larger percentage of deaths in the first year than for some time after; and yet, as cancer is usually a chronic disease, and death from



alcoholism follows after a long period of indulgence, there must, in most of the cases, have been some neglect or concealment to have procured the policy of insurance. With regard to consumption, the mortality during the first year is comparatively small, the average percentage being 17.61, and for the first year 8.05, while the actual mortality from this disease during the first year is forty-three deaths out of the thousands insured by the company. On the other hand, the proportion of deaths from this cause rises rapidly in the second year to 17.50 per cent., and continues still further to increase. These figures seem to show that, notwithstanding all the care taken by the company and its medical examiners, it is chiefly successful in excluding those who have some symptoms of consumption present at the time, while a large number of those who have a tendency to the disease are freely admitted to the benefits of insurance.

There are some causes of death with regard to which it is evident that the selection effected by the medical examiners will have little influence—for instance, typhoid and other fevers, acute inflammations of the lungs and digestive organs, accidents, &c.

Some of these may be guarded against by considering the special residences and occupations of applicants, but in general, the most rigid examination will fail to separate those likely to die from these causes; consequently, the large proportions of deaths occurring soon after insurance should be from these and similar causes, while the more chronic diseases should occasion the mortality among those who have been insured for many years.

By examination of the tables we find this to be the case. Deaths by zymotic diseases and accident form a percentage of 44.19 during the first year of insurance and 18.68 after the tenth year, while diseases of the circulatory, nervous and urinary systems, give a percentage of 36.78 for the later period and 19.84 for the earlier. It must be remembered, however, that we have proved that there are these same differences between the diseases of youth and advanced life, and that the

causes of death at early ages and the first years of insurance, and those of advanced life and after many years of insurance, are almost exactly the same. We believe, however, that age is not the main element in determining the cause of death, but that the medical selection is more important on account of some well marked exceptions to the rule of diseases as affected by age alone.

We have already spoken of consumption, which is the principal cause of death among the young, but gives only a small percentage for the first year of insurance; and, again, apoplexy increases uniformly in accordance with the age, but the proportion during the first year of insurance is equal to that of the later periods.

The mortality from heart diseases increases directly with the years insured from a percentage of 3.18 in the first year, to 8.88 in the period above ten years of insurance. The percentage during the first year seems to be larger than ought to occur after a careful examination. Pneumonia occasions a large number of deaths at every period of insurance, with the highest percentage during the first year.

Diseases of the digestive organs, taken together, acute and chronic, give nearly the same proportional mortality for each period; diseases of the liver, however, increase in number with the years of insurance.

Diseases of the kidneys and other urinary organs give a very small percentage for the earlier years of insurance, and increase rapidly in the later periods; the percentage being 1.87 for the first, and 6.57 for the last. Of the 59 deaths by suicide, 13 occurred during the first year of insurance, being a percentage of 22.03, while that of the entire mortality for the same period is only 10.22.

The colored diagram XVI. represents to the eye the course and prevalence of each class of diseases through the different periods of insurance.

We have now gone over and attempted to elucidate the statistical



tables that we have compiled. We think they are of much value, and display in a clear light the past experience of the Company in important particulars. All these facts, however, give only a small part of the valuable information contained in the Company's mortuary records. The questions of business and occupation, physical condition and conformation, previous diseases, and, most difficult of all, hereditary tendencies to longevity and special causes of death have not been yet touched upon.

Moreover, each disease must be analyzed by itself, and all its causes traced out with the effect of counterbalancing or aggravating influences. For example, it has been shown by our statistics that early manhood gives a very large percentage of mortality from consumption; and, again, that New England gives a larger percentage from the same disease than Kentucky and Tennessee. Does New England afford a larger mortality *because* a younger class of men insure in that section, and the reverse is the case in Kentucky and Tennessee? or, does the climate actually influence the disease? Again, foreigners have died of cancer in larger proportions than the native born. Old persons have died in larger numbers from this disease than the young. How do these facts modify our conclusions?

We cite these instances merely to show how thorough the analysis should be before entirely reliable conclusions can be drawn. With your approval, we will proceed to investigate these questions and will give you the results in due season.

G. S. WINSTON, M. D.,  
E. J. MARSH, M. D.



ACTUARIAL STATISTICS.

TRUSTEES AND OFFICERS  
OF THE  
MUTUAL LIFE INSURANCE COMPANY OF NEW-YORK.

DECEMBER 31, 1875.

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Vice-President.

FREDERICK S. WINSTON,

President.

BROADWAY, CORNER OF LIBERTY STREET.

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